Utah Watershed Review

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NPS Conference Set for Bryce Canyon

Beautiful Bryce Canyon National Park is less than a mile from the Ruby's Inn Conference Center, the site of the 2004 Utah Nonpoint Source Water Quality Conference, September 14-16. Please see the conference announcement on page 4 of this publication, and look for the registration packet in mid August.

First Annual Upper Sevier Watershed Days A Success

PANGUITCH--The first annual Upper Sevier River Watershed Days combined education with watershed improvement for local high school and elementary school students.

On May 18th, about 20 Panguitch High School students and several agency employees gathered on the Upper Sevier River at the Dodds Family Farm to restore and revegetate stream banks as part of the overall watershed improvement plan.

Students and adults worked to stabilize the stream bank by placing cut conifer trees horizontally against the bank and staking them the bank.

"They're designed to fill in with sediment and vegetation," said Kevin Heaton, Utah State University Extension. "They serve to stabilize and rebuild the stream bank."

On the other side of the stream, a crew worked to plant willow cuttings along a section of bank that had been graded by a backhoe earlier.

Local soil conservation district and Natural Resources Conservation Service Employees plant willow cuttings using a water stinger, that creates a hole by forcing a high pressure spray of water into the ground.

Work Begins to Remove Sediment from Rees Creek

By Doug Garfield
Summit Soil Conservation District

Black thunderheads rolled across the upper Echo Creek watershed as a cloudburst of rain pelts down on the red clay soil. Within minutes the streambed swells with a red, roiling torrent as the sediment laden stream makes its way down Echo Canyon towards the Weber River.

This scenario has been played out for decades in the Echo Creek watershed. Sediments from the highly erosive landscape composed of clay, shale, and conglomerate based soils have been transported by Echo Creek into the Weber River for as long as anyone can remember. Activities within the watershed from road construction, overgrazing and indiscriminate weed spaying have accelerated rates of erosion and soil loss over the last few decades contributing to a downtrend in water quality not only in Echo Creek but also in the Weber River.

One example of a landowner seeking to improve water quality within the Echo Creek watershed is the Ensign Ranch Co. Ensign Ranch, in a cooperative effort with the Utah Department of Agriculture and Food (UDAF), Natural Resource Conservation Service (NRCS), Weber Basin Water Conservancy District (WBWCD), the Utah Department of Environmental Quality (UDEQ) and the Summit Soil Conservation District have embarked on an ambitious effort to reduce the amount of sediment flowing into Echo Creek. The project is being funded by Ensign Ranch, the (UDAF) with 319 water quality funding and the (WBWCD) with a clean drinking water grant. Technical assistance has been provided by (NRCS), (UDEQ)) and the Summit SCD. The Weber Basin Water Conservancy District has been a key player in the project providing funding and water quality monitoring assistance.

Rees creek, a major tributary of Echo creek, has been a constant source of sediment contributing over 50% of the sediment load transported by Echo creek into the Weber River. Rees Creek flows through lands owned by the Ensign Ranch Corporation. Ensign assumed ownership of the land in 1994. When Ensign acquired the ranch range conditions were poor and erosion had become a major problem on Rees creek. Since the acquisition Ensign has implemented numerous grazing and range management practices that have increased production, reduced erosion and drastically improved range condition. Ensign currently grazes around 5,000 head of cattle on the ranch along with abundant populations of big game and other wildlife.

The Rees creek project is a great example of a win/win project for the landowner, the resource as well as consumptive user's down stream. The construction phase of the project began in early July. The design consists of a series of excavated basins and dams each with a reinforced spillway. The basins are designed to slow water flow allowing sediments suspended in the stream to settle out in the basins. The excess water flows over the spillway of each pond into the next pond further downstream. There are seven different settling ponds as you move down the watershed. In addition portions of new stream channel will be excavated to replace an old deeply eroded stream channel which has functioned like a drain dropping the water table and drying up the once wet meadows. Through the ponds and the new channel, the once existing wet meadow conditions will be restored to the area. In addition a number of water developments will be developed on both sides of the stream in the uplands away from the meadows to shift livestock use and impact away from the riparian area along Rees creek. Willow plantings will be used to reestablish woody vegetation along the stream. The root mats created by willows help to hold and stabilize soils and armor the banks against the erosive energy of the moving water.

A series of small sediment retention ponds are being built on the Ensign Ranches on Rees Creek in Summit County to filter out sediment that has been choking Rees Creek and Echo Creek for years.

When Jeff Young the ranch manger for Ensign was asked why does the ranch implement projects of this type his reply was eloquently simple. Jeff said "it is the right thing to do". The ranch is in the business of managing its lands and resources for the long haul, not just for short term benefit. The ranch considers a healthy sustainable system necessary for its operation. This project will have both long and short term benefits. Upon completion sediment that otherwise would be transported downstream during spring runoff and during thunderstorm events will now be captured and retained in the ponds. It is estimated that as much as 33% of the sediment transported by Echo creek will be captured by this project. Woody vegetation will once again hold soil in place and new wetlands will be created which will provide additional productive wildlife habitat. Forage production will increase as the water table rises restoring the wet meadow conditions once again.

Near the confluence of Rees creek and Echo Creek a permanent water quality monitoring station and flow meter have been constructed to measure the success and impact the project will have on water quality in Rees creek. The station has the capability to measure all basic water quality data such as temperature, pH, and turbidity.

The benefits are numerous. The ranch sees an increase in overall production and is better able to distribute its cattle and improve range use. Wildlife is provided new wetland and riparian habitat that had been lost and water users downstream will see a reduction in the amount of sediment transported into the Weber River

Mark Quilter, Utah Department of Agriculture and Food, teaches Morgan Elementary School students about ground water during the Morgan Soil Conservation District Farm Field Day at Fred Thurston's ranch in the foothills west of Morgan

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Upper Sevier River Day

Continued from front

A high pressure water sprayer, known as a water stinger, was used to create holes for planting willow cuttings. The stinger "digs" a hole just wide enough for the stick-like willow cutting. Once the hole is created, the willow is placed in the hole and some of the displaced soil is molded around the cutting.

Following the morning's work, the students and adult volunteers were treated to a barbecue lunch and an Adopt-A-Waterbody/ Governor's Watershed Initiative awards ceremony.

The following day about 200 students from Panguitch Elementary School participated in watershed education and restoration activities at the school's outdoor classroom on Panguitch Creek.

Local watershed coordinators plan to make the Upper Sevier River Watershed Day an annual event, much in the way the Beaver River Watershed Day has become an annual tradition in Beaver for the past seven years.

Courtesy: Utah Association of Conservation Districts

Above: Students from Panguitch High School help Kevin Heaton (right), USU Extension, drive holes into the bank. Stakes are put into the holes to help hold the conifer tree bundles into place until the bank stabilizes.

Left: Tyce Palmer, Utah Association of Conservation Districts, teaches students from Panguitch Elementary School about water pollution and soil conservation during the second day of the Upper Sevier River Watershed Days in May.

Utah Animal Feeding Operation Publication and Video Available Soon

Utah's Animal Feeding Operation Strategy implementation team has produced a new publication and video/DVD about the manure management strategy and implementation process to this point.

The publication--Utah Animal Feeding Operations: Five Years of Progress--1999-2004, and the video/DVD counterpart--Managing Manure: Utah Animal feeding Operation Strategy--1999-2004, are slated for release in early September 2004.

Both the publication and the video will recap the development of the Utah strategy, the assessment phase and the implementation to this point. They will also feature a few short case study examples of some of the work being done on farms and ranches.

For a copy, contact: jackwilbur@utah.gov

Adopt-A-Waterbody Projects Getting More Ambitious

Volunteers from the North Summit High FFA organization help Chalk Creek watershed coordinators plant willows, and install a willow matress and cut conifer trees to stablize the stream bank to reduce sediment erosion and phosphorus loading.

While most of the Adopt-A-Waterbody projects throughout Utah continue to consist of small groups picking up trash, planting trees or monitoring water quality, more and more large-scale or technically challenging efforts having been taking place recently.

Conifer revetment, willow matresses and willow pole plantings using water stingers are no longer techniques or terms used only by highly trained professionals. The trained pros are now starting to work with select volunteer groups to do some of these projects for less money.

In Panguitch in May, the Upper Sevier River Watershed Days consisted of one day with a small group of high school students doing this type of physical, specialized work, and a second day with a large group of elementary school students that focused on water education and simple riparian planting.

FFA students from North Summit High School took part in a similar project on the South Fork of Chalk Creek in August.

About a dozen local students and three young adult volunteers from the Utah Federation for Youth in Salt Lake City, spent about five hours in and near the stream restoring a small, but badly eroded section of the creek.

In both cases, the volunteer efforts were part of the larger watershed and TMDL plans.

Hip in Waders?

Two "bugs" and Governor Walker Promote Healthy Watersheds on TV

The Governor's Watershed Initiative and the Adopt-A-waterbody program were recently the focus of the live remote interviews segments during the KUTV morning news show.

Every weekday morning before the sun comes up, Kelly Chapman and her video photo journalist are up and out somewhere in the community doing live interviews about a variety of community interest topics from rodeos and fairs, to recreation and entertainment options.

On July 26, 2004, Chapman and her crew featured Jeff Salt, Great Salt Lake Keeper, and Utah Governor Olene Walker live from Red Butte Creek east of the University of Utah in Salt Lake City.

During the first two segments, Salt and Chapman did some simple water chemistry tests that volunteer Adopt-A-Waterbody groups can do at their local stream or lake.

During the second hour they were joined by the Governor, complete with chest waders and a "bug" net. The threesome looked at macroinvertebrate insects that live in the water and the Governor talked about the importance of getting involved in watershed protection and improvement.

"We've urged people in 25 watersheds, which is a about a fifth of the State of Utah, to work on improving the watersheds around streams," Walker said.

Walker urged Utahns all over the state to get involved and talked about some of the things volunteers do as part of the Adopt-A-Waterbody program.

"They work to plant the trees that are appropriate in retaining water and stopping erosion. And they've cleaned up the streams and watersheds and make them more productive.

The Governor also discussed classroom education as part of the Watershed Initiative, saying that positive watershed education today is a key to positive watershed actions tomorrow.

The Governor's Watershed Initiative is spear headed by three state agencies: Utah Department of Natural Resources, Utah Department of Agriculture and Food and Utah Department of Environmental Quality. Many other agencies and private, non-profit organizations participate in statewide and local watershed efforts as part of the Initiative.

Salt, who is also the chair of the Utah Watershed Coordinator Council, sits on the Governor's Watershed Initiative planning team. He organized the KUTV morning news coverage.

Utah Governor Olene Walker (right), joined Jeff Salt, Great Salt Lakekeeper (left), and KUTV News Reporter Kelly Chapman for a morning in the stream as part of KUTV's July 26, 2004 morning news show.